Remarks

Claims 1 and 4-8 are currently pending in the patent application. For the reasons set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

The non-final Office Action dated May 30, 2007 indicated that claims 1-2 and 4 stand rejected under 35 U.S.C. § 102(b) over Umemoto *et al.* (US 5,982,171); claims 1, 2 and 4 stand rejected under 35 U.S.C. § 103(a) over Eck *et al.* (US 5,038,130) in view of Umemoto *et al.*; claims 3 and 5 stand rejected under 35 U.S.C. § 103(a) over Eck in view of Umemoto *et al.* and further in view of Seefeldt (US 5,744,950) or Sampey (US 5,877,705).

Applicant respectfully submits that the Section 102(b) rejection of claims 1 and 4 cannot stand because the cited portions of the Umemoto reference do not correspond to claim limitations directed to the resistance-values of each of the ohmic resistance elements varying in phase with one another. The cited portions of Umemoto teach that the resistances of magnetoresistive devices 10A and 10D increase while the resistances of magnetoresistive devices 10B and 10C decrease, due to the magnetic field applied to devices 10A and 10D being, in effect, opposite in phase to that applied to devices 10B and 10C. *See, e.g.*, Figure 3 and Col. 9:8-59. Thus, the cited portions of the Umemoto reference do not teach the resistances of each of the resistors vary in phase with one another as in the claimed invention. Accordingly, Applicant requests that the Section 102(b) rejection of claims 1 and 4 be withdrawn.

Applicant respectfully submits that the Section 103(a) rejections of claims 1 and 4-5 cannot stand because the cited portions of the Eck reference do not correspond to claim limitations directed to the resistance-values of each of the ohmic resistance elements varying in phase with one another. The cited portions of Eck teach that the resistances of magnetoresistive resistors 52 and 58 increase while the resistances of magnetoresistive resistors 54 and 56 decrease, because the resistors are positioned in pairs (*i.e.*, 52 and 58, and 54 and 56) such that when the magnetic field is increasing at one pair, it is decreasing at the other pair. *See, e.g.*, Figure 7 and Col. 5:62 to Col. 6:38. As such, the cited portions of the Eck reference do not teach the resistances of each of the

resistors vary in phase with one another as in the claimed invention. Applicant notes that the rejections are based on Eck's Figure 6, which uses fixed resistors 46 and 48 instead of each resister having a resistance-value that depends on the strength of the magnetic field as required by the claim limitations; thus, Applicant has addressed the rejections in relation to Eck's Figure 7, which uses four magnetoresistive resistors. In view of the above, Applicant requests that the Section 103(a) rejections of claims 1 and 4-5 be withdrawn.

Applicant notes that minor amendments have been made to claims 4 and 5 to improve readability. These amendments are not being made to overcome the rejections raised by the instant Office Action, which fail for the reasons discussed above. Applicant has also added new claims 6-8, which depend from claim 1. Applicant submits that claims 6-8 are allowable over the cited references for at least the reasons discussed above.

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In view of the above, Applicant believes that each of the rejections has been overcome and accordingly understands that the claims should be in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063.

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